

# In pursuit of excellence

Evidence-based Training



# Yesterday's menu



- Flight preparation
- Before take-off check
- Engine Failure at V1
- Rejected take-off
- Instrument arrival
- Engine-out approach
- Engine-out Go Around
- Non-precision approach
- LVO Approaches
- Engine-out landing

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# EBT Program training topics

## Gen 3 Jet

A

Adverse weather  
Automation  
Competencies non-technical  
Compliance  
Go-around  
Manual flying  
Mismanaged aircraft  
Monitoring & Error Detection  
Unstable approach

B

Adverse wind  
Aircraft malfunction  
Aircraft system management  
Approach poor visibility  
Landing  
Runway taxiway condition  
Surprise  
Workload pressure

C

ATC  
Engine failure  
Fire & smoke  
Loss of comms  
Loading performance  
Navigation  
Ops or type specific  
Pilot incapacitation  
Terrain  
Traffic  
Upset recovery  
Windshear recovery

# EBT Program

First look  
assessment

Day 1

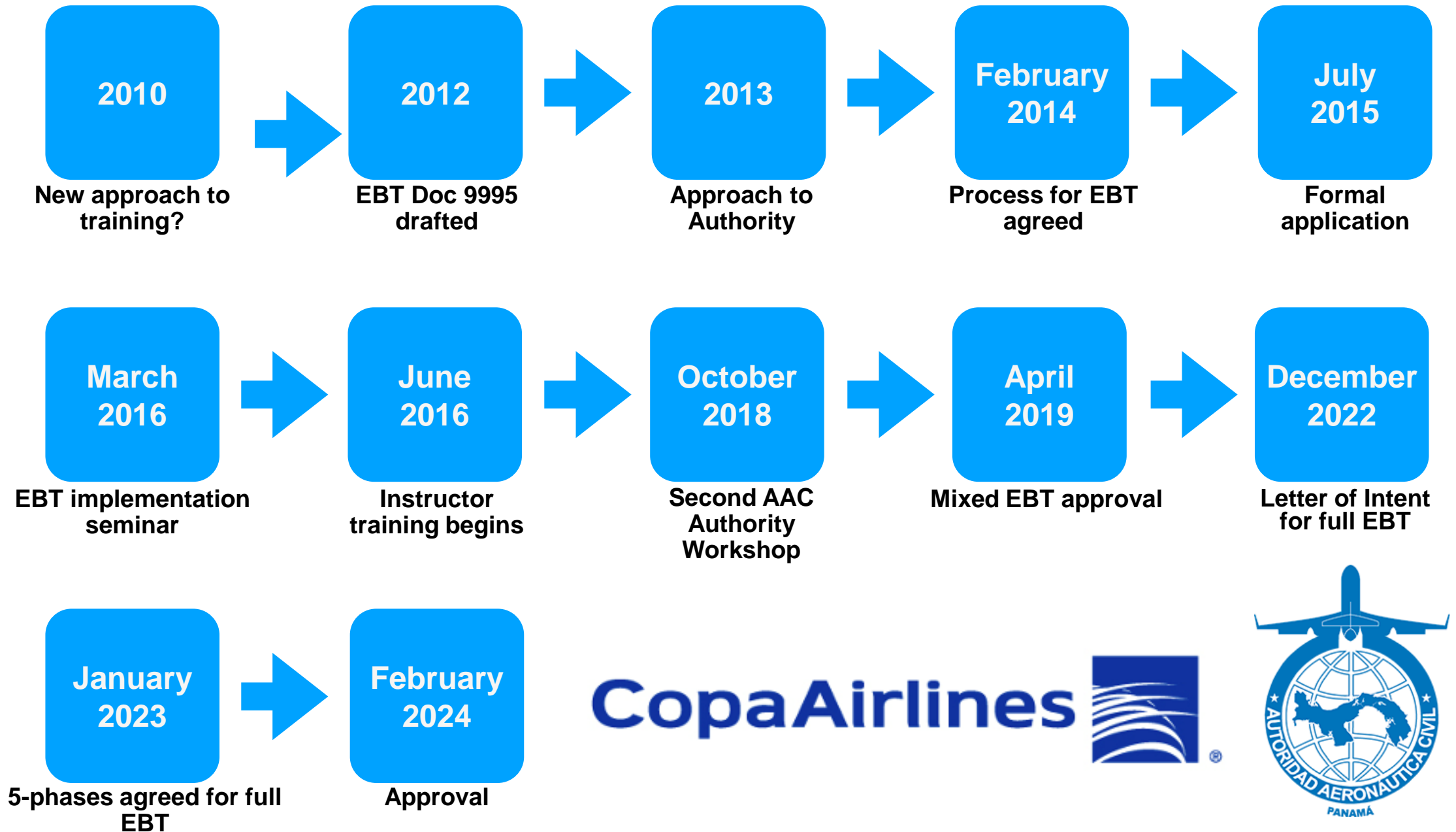
Evaluation	Maneuvers
Assess Competency identify needs	Verify maneuver skills
Line-oriented evaluation	"V1 cut" All engine go around (New)
	Proficiency

Tailored learning

Day 2

Scenario based training	In-seat instruction
Tailored learning by exposure	Error detection monitoring
Line-oriented training	Non assessable





# CBTA/EBT Principles





# Instructor development training





# Observations - IRR

#1	CAPT				F10				
APK ✓	1	2	1	2	3	3			
COM -	2	2	1	2	2	4			
FPA	X	X	X	X	3	4			
FPM -	1	2	1	2	3	4			
KNO	X	X	X	X	X	X			
LTW X	1	2	3	3	3	4			
PSD ✓	1	1	1	2	3	4			
SAW ✓	3	2	3	3	3	4	4	3	✓
WLM ✓	3	2	2	3	3	3	4	3	✓

#2	CAPT				F10				
APK ✓	2	3	3	3	3	4			
COM ✓	3	3	3	2	3	3			
FPA ✓	3	3	3	3	3	3			
FPM	X	X	X	X	X	X			
KNO ✓	3	2	3	3	3	4			
LTW ✓	2	3	2	2	3	4			
PSD ✓	3	2	2	2	3	4			
SAW ✓	3	3	3	2	3	4			
WLM ✓	2	2	2	2	3	4			

#1	CAPT				F10				
APK ✓	3	4	3	3	4	4	3	4	✓
COM ✓	3	3	3	3	2	3	3	3	✓
FPA	X	X	X	X	4	5	5	4	✓
FPM ✓	3	3	3	3	4	4	5	4	✓
KNO ✓	4	4	3	3	4	4	3	3	✓
LTW ✓	3	3	2	3	4	3	3	3	X
PSD ✓	3	3	3	3	4	4	4	3	✓
SAW ✓	3	3	3	3	3	4	4	3	✓
WLM ✓	2	3	3	3	4	4	4	3	✓



# Implementation roadmap

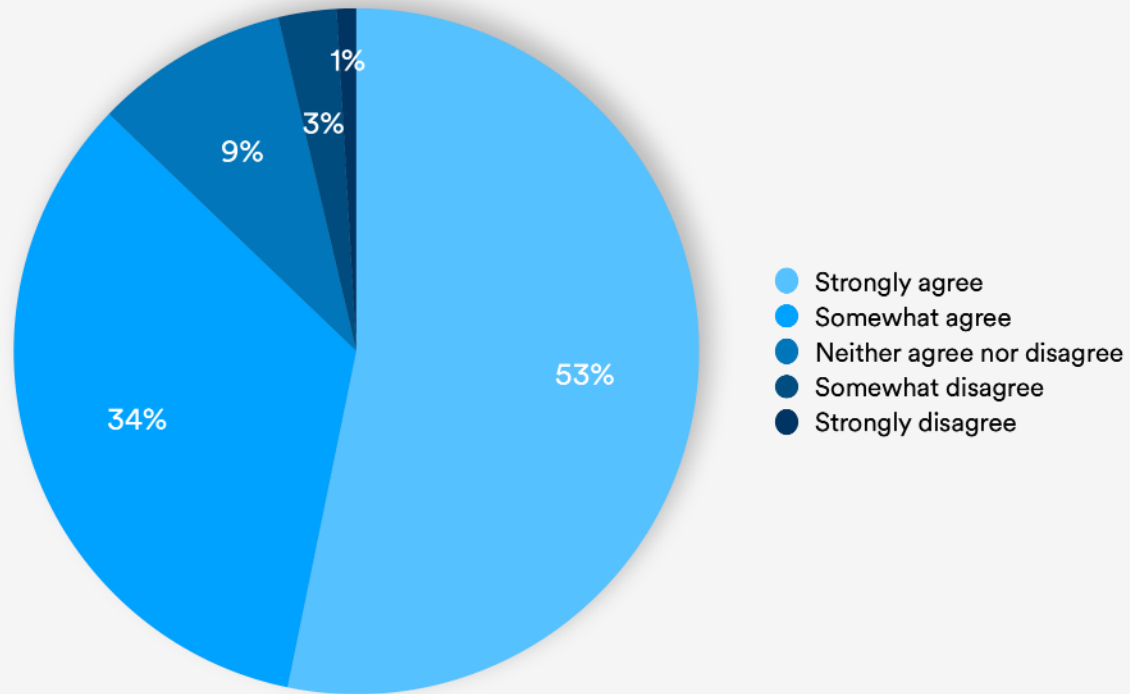




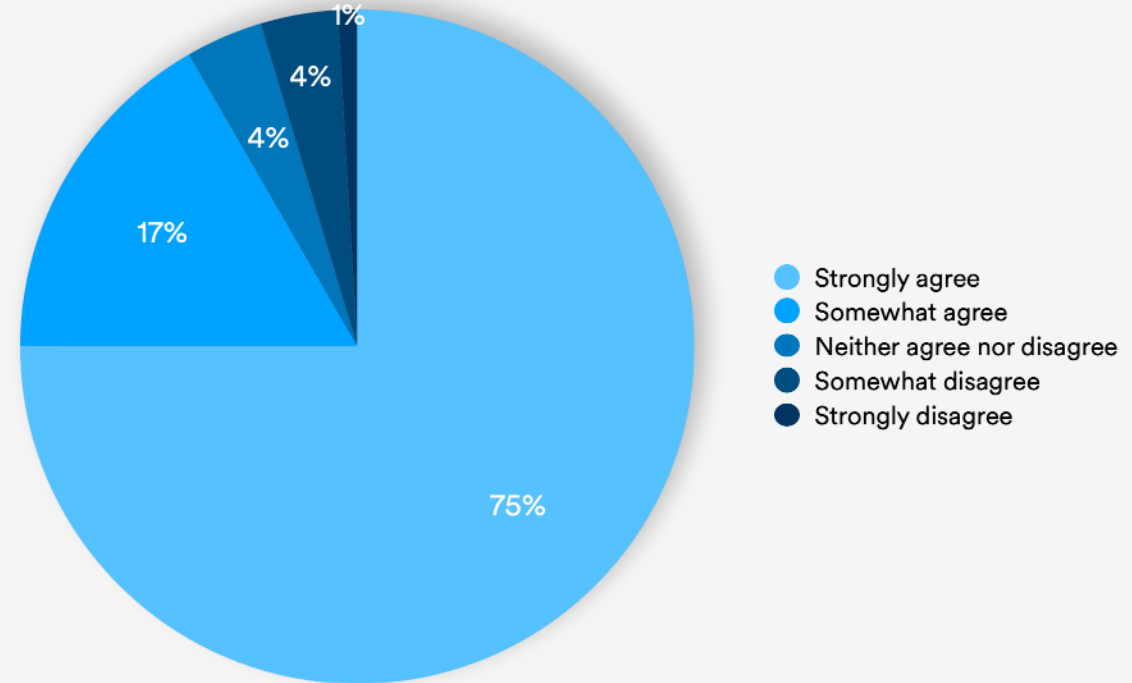
**Course developer training**

**Competency focused  
scenario development**

# Feedback



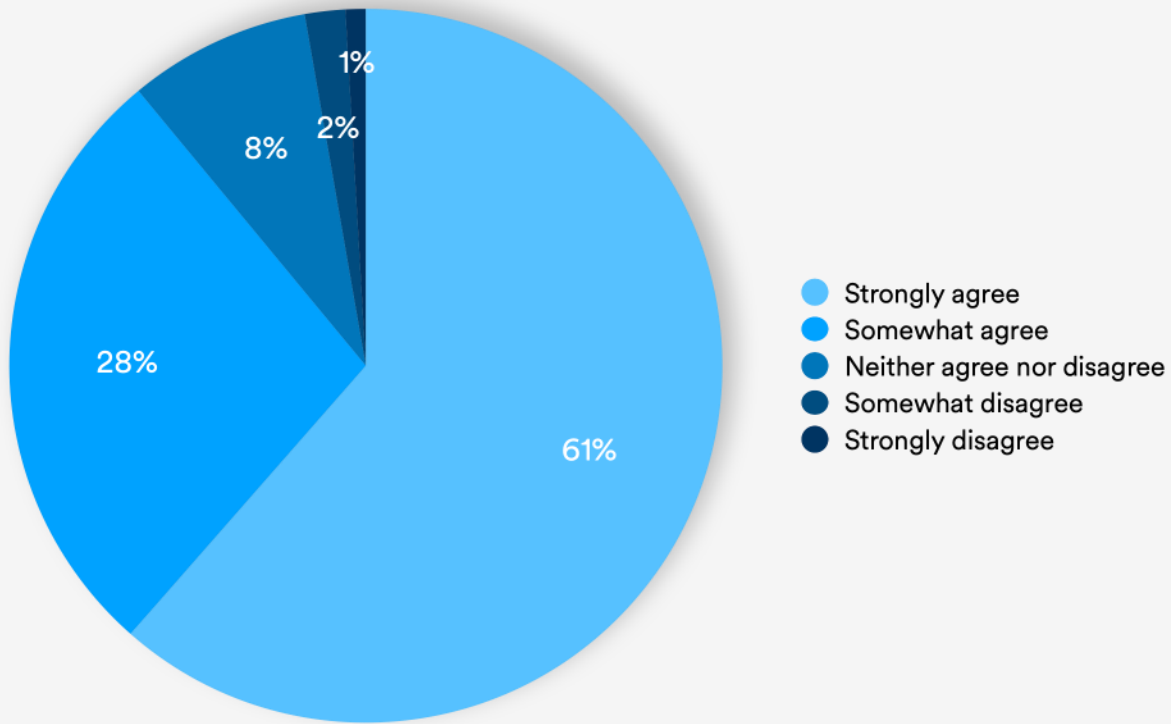
The examiner/instructor accurately identified the **most appropriate area to help me to improve**



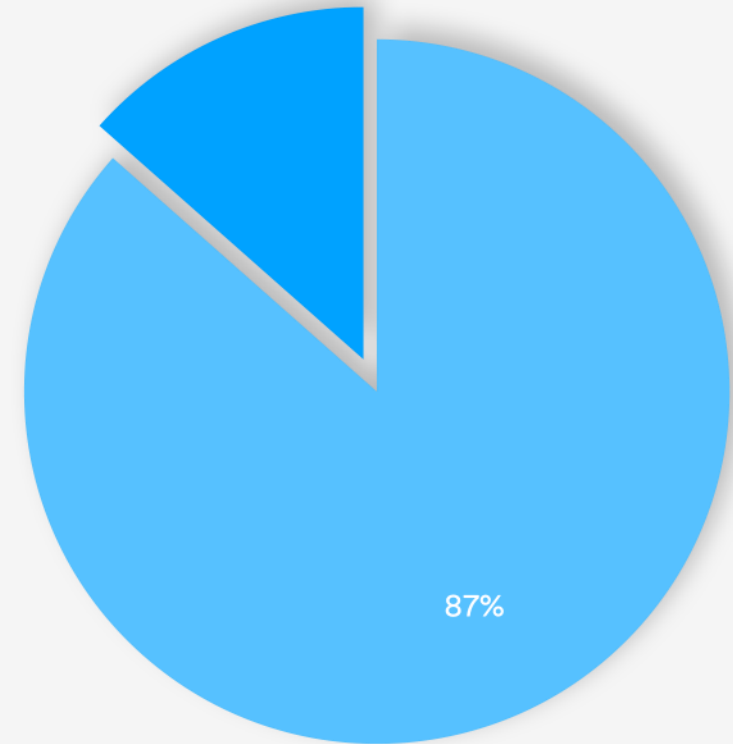
**I did not feel judged** and the assessments were fair and accurate



# Feedback

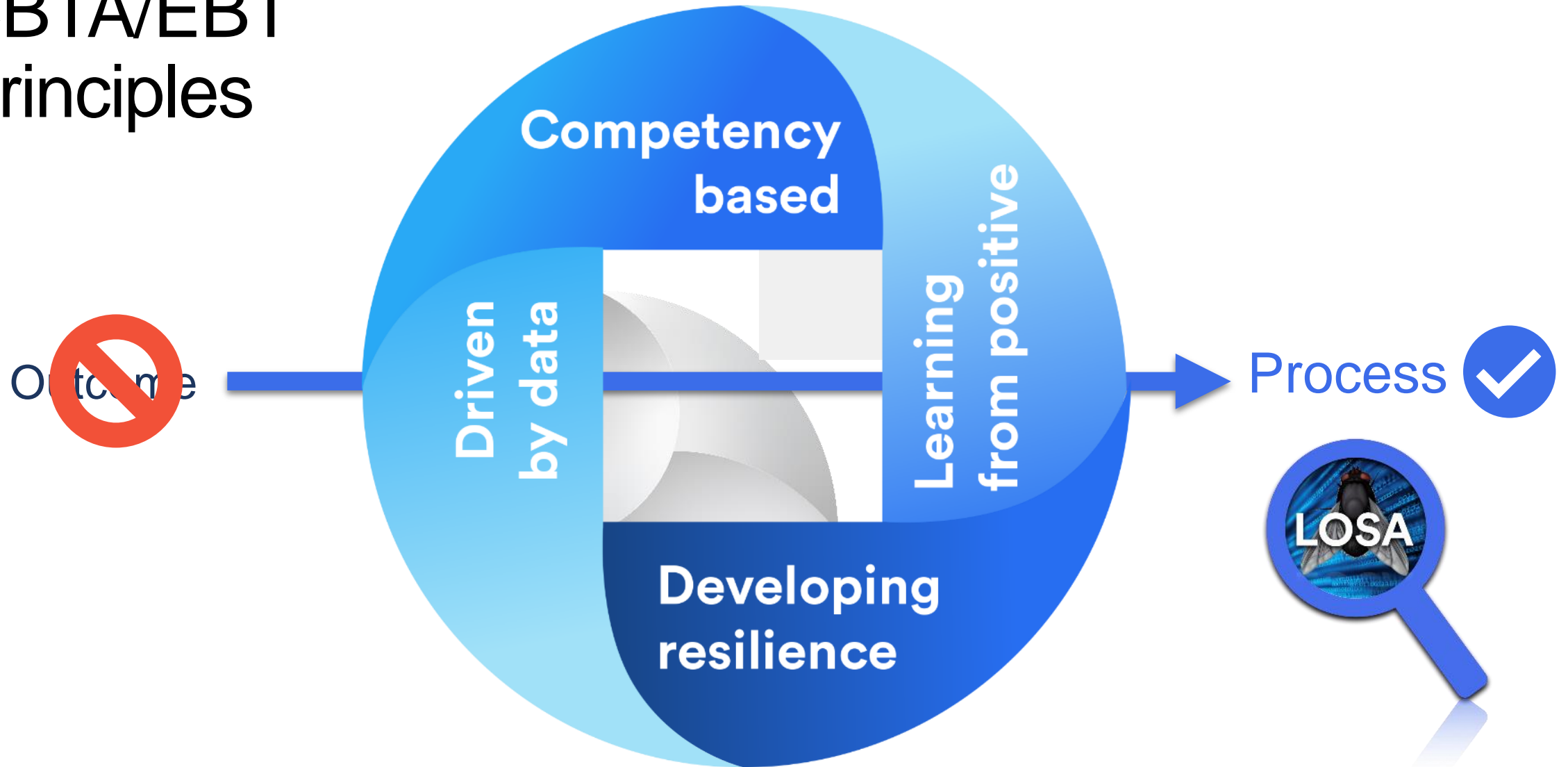


The Instructor/s **facilitated the debrief** and supported me so I could **draw my own conclusions** and identify strategies to improve

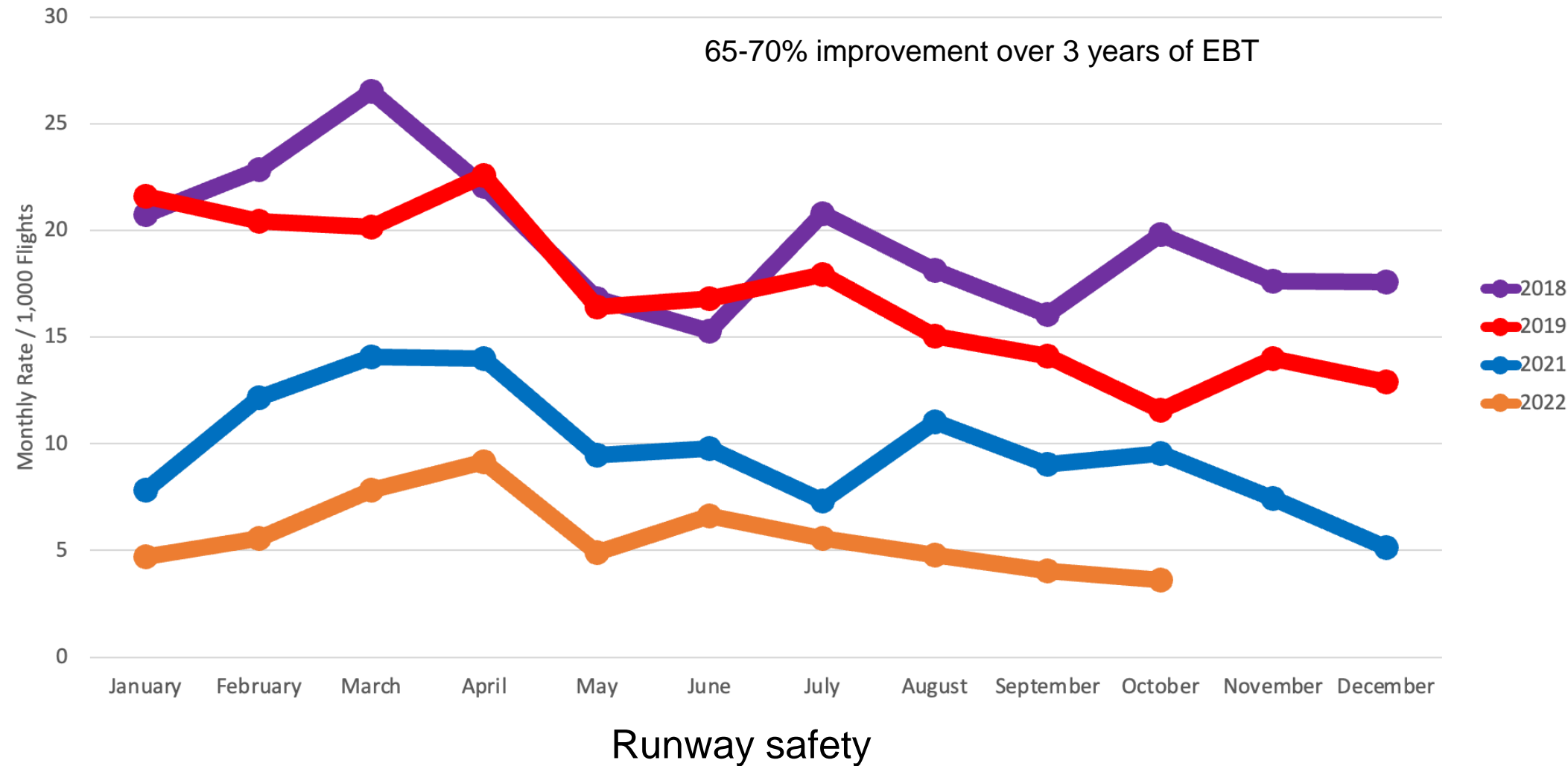


The whole EBT experience will help me to learn and improve confidence. Do you agree?

# CBTA/EBT Principles

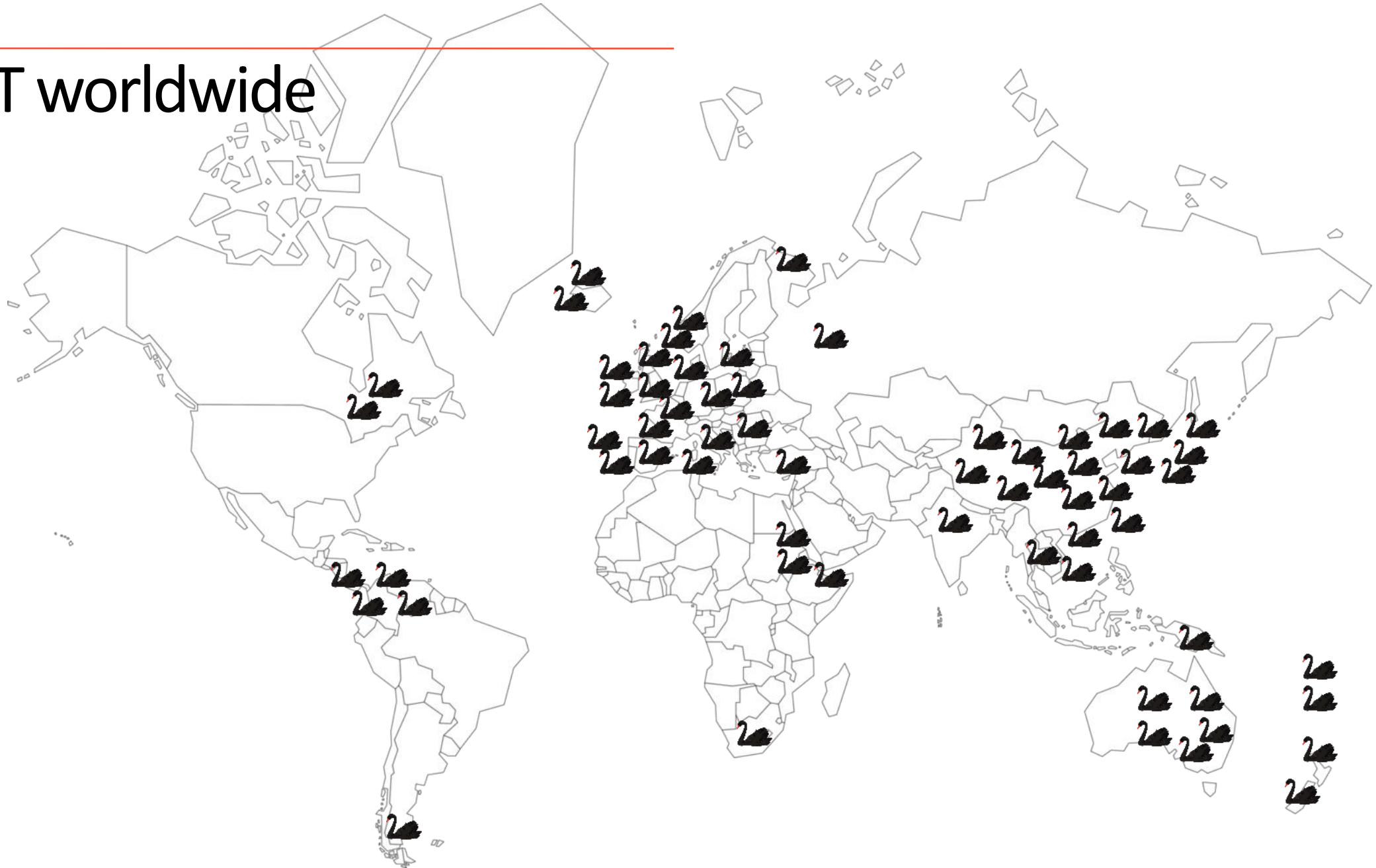


# Results - safety data





# EBT worldwide





# ACKNOWLEDGEMENTS

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Dr James Kinect	Scientist
Dr Ashleigh Merritt	Statistician
Professor Patrick Murray	Pilot/Instructor/Scientist
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Soren Foss	Pilot
Vinod Gopalakrishnan	Pilot
Dieter Harms	Pilot
Magnus Heide	Pilot
Arto Helonen	Pilot
Mark L'Esperance	Pilot
Mary Leary	Pilot
Matthias	Pilot

A  
Bac

- 1) ...
- 2) ...
- 3) Signi...
- 4) The crow...
- 5) All accident data...
- 6) ICAO mandated the analysis of flight data...

This purpose of this document is to outline the necessary steps plus the outcome of activities such as LOSA, to provide a fleet a design of crew training and the safety standards for the regulation of...

Dr Simon Henderson	Pilot/Instructor
William O'Kane	Pilot/Instructor
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Eric Vanner	Pilot/Instructor



## Data Report for Evidence-Based Training

July 2013

1st Edition

International Civil Aviation Organization



## Evidence-Based Training Implementation Guide

July 2013

1st Edition



Yours sincerely,

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ICAO

Doc 9868

PROCEDURES FOR AIR NAVIGATION SERVICES

## Training

Third Edition, 2020

This edition incorporates all amendments approved by the Council prior to 8 June 2020 and supersedes on 5 November 2020, all previous editions of Doc 9868.

INTERNATIONAL CIVIL AVIATION ORGANIZATION



Striving for excellence

Solution based feedback

Addressing vulnerabilities

Focussed on process

Relevant to the job

not T!

Tailored to individual needs

Non-judgemental

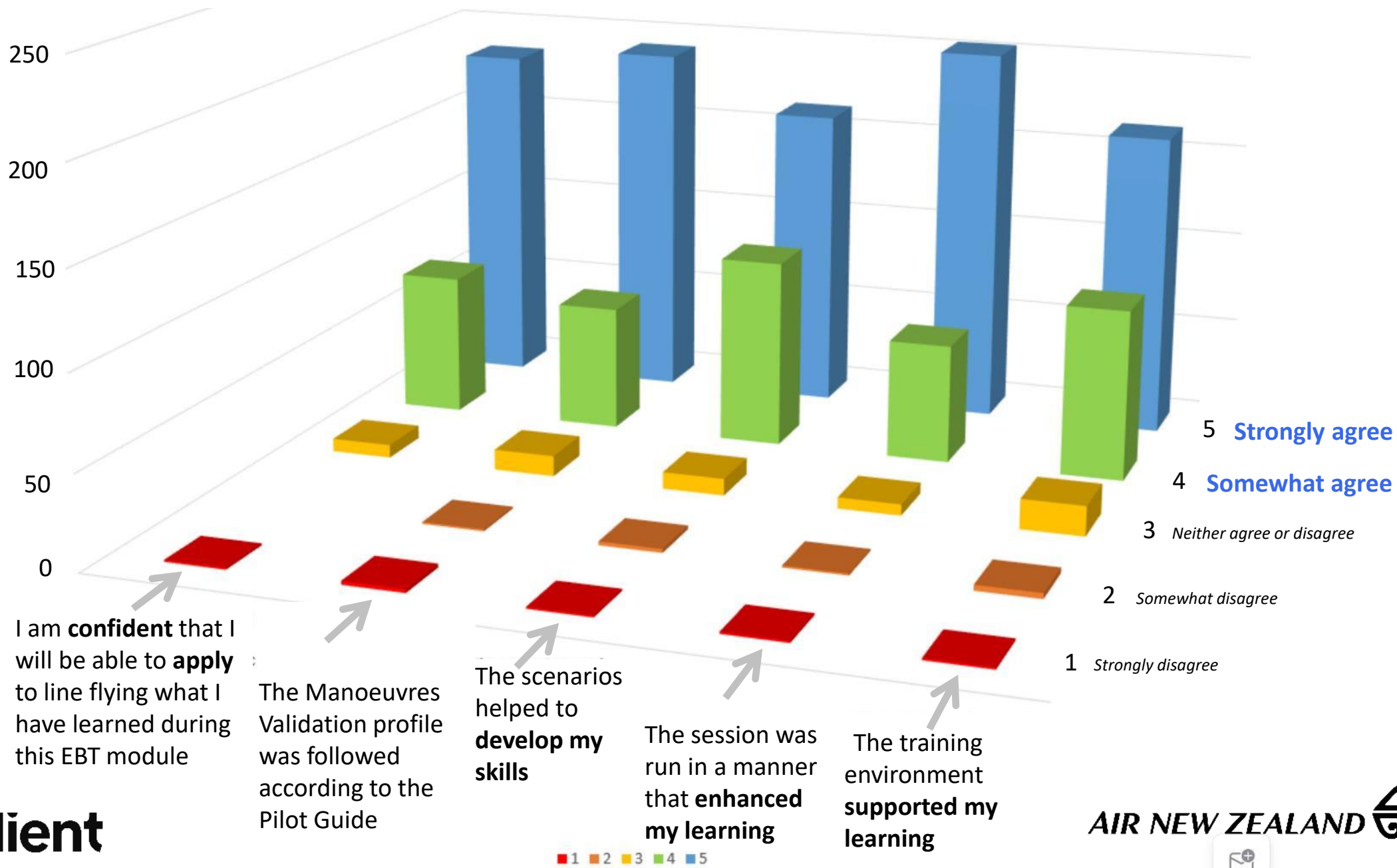
Self-directed learning

Supports self-efficacy

Learning by discovery







**“We spent a considerable amount of time reassuring our pilots that this was all about personal professional development, much like a doctor may attend a symposium to discover the latest techniques and learn from them.”**

**“I learned a great deal from the Salient team, seeking their advice in dealing with the regulator and help us in training the first cohort of about 130 simulator-based instructors and implementing a new IT system.”**

**First signs are that the training has been universally well received, with 90% positive feedback, including from pilots with 30+ years’ experience and who might previously have feared coming into a simulator.**





**Relevant to  
real life**

**Immersive  
experience**

**Focus on  
process**

**Learn from  
positive**



 **Salient**



**CopaAirlines** 